

REQUESTOR NAME: **BC Sustainable Energy Association and Sierra Club BC**
INFORMATION REQUEST ROUND NO: 1
TO: **Association of Major Power Customers**
DATE: **March 10, 2017**
PROJECT NO: **3698869**
APPLICATION NAME: **BC Hydro F2017 to F2019 Revenue Requirements Application**

1.0 Topic: Transmission service load
Reference: Exhibit C9-7, AMPC Evidence, Table, BC Hydro Domestic & Industrial Load (GWh), p.4

AMPC says that “BC Hydro’s industrial load has declined by 17% between 2006 and 2015.”

- 1.1 Please confirm that the Table also shows that BC Hydro’s industrial load declined by 21% between F2006 and F2010 and rose by 5% between F2010 and F2016.
- 1.2 What portion of the 21% decline in BC Hydro’s industrial load between F2006 and F2010 does AMPC attribute to BC Hydro’s rates or rate increases?
- 1.3 Has AMPC compared the industrial load and electricity prices and price increases of comparator public utilities in other Canadian jurisdictions for the F2006-F2015 period, or the F2006 to F2010 period and the F2010 to F2016 period, with those of BC Hydro? If so, please provide the results.
- 1.4 Please provide a figure showing the BC Hydro Annual Industrial Load for the F2005 to F2016 period, along with metric AMPC is using for Industrial price and price increase. Please indicate which price metric is used.
 - 1.4.1 Please discuss whether there is an observable correlation between Annual Industrial Load and Industrial price or price increase over this period.
- 1.5 Does AMPC have an explanation for the 5% increase in transmission service load between F2010 and F2016?

2.0 Topic: Load forecast
Reference: Exhibit C9-7, AMPC Evidence, pp.6-7

“BC Hydro’s Application explains that it uses an “account-by-account” method to forecast large industrial sales, informed by multiple sources of information, modified by an individual probability factor and a common demand elasticity factor.” [p.6]

“As mentioned, BC Hydro applies a common small demand elasticity factor (the extent to which rate increases discourage load growth) of -0.05 to each of residential, commercial, light industrial, and large industrial rate classes:...” [p.7]

“BC Hydro also explained that individual customer estimates played a larger role for the industrial rate class instead of elasticity studies:...” [p.7]

“AMPC is reasonably concerned that over-optimistic demand elasticity assumptions and load forecasts may lead to rate increases before the expiry of the 10-year rate plan that are unsustainable for multiple industrial customers, leading to relocated production and lost revenues.” [p.8, underline added]

- 2.1 Please confirm that AMPC’s view that BC Hydro’s mid-level load forecast for transmission service customers is too high, i.e., it is higher than an accurate forecast would be.
- 2.2 Regarding demand elasticity, is AMPC’s point that BC Hydro should not use a demand elasticity adjustment in its industrial load forecast, or that BC Hydro should use a demand elasticity figure that is larger than -0.5 (on an absolute value basis) in forecasting industrial load?
 - 2.2.1 If the latter, what does AMPC suggest would be an accurate demand elasticity figure for the transmission service class?
- 2.3 What is AMPC’s view of the ‘account by account’ component of BC Hydro’s load forecast for transmission service load?
 - 2.3.1 Is AMPC saying that the probability weightings that BC Hydro applies on an account level are too low?
- 2.4 Does AMPC have an estimate of the amount by which BC Hydro’s transmission service load forecast is too high?
- 2.5 Is it correct that AMPC’s main point is not that BC Hydro’s methodology for forecasting the transmission service load should be changed but that BC Hydro’s Ten Year Rates Plan is unrealistic, i.e., that beyond the test period, other things being equal, either rates will exceed 2.6% per year or the revenue requirement will not be fully recovered by the end of the Ten Year period and the shortfall will be to the account of ratepayers.

3.0 Topic: Industrial Customers -- Definitions

Reference: Exhibit C9-7, AMPC Evidence; Exhibit B-1-1, pdf p.110

- 3.1 For load forecasting, BC Hydro uses the term “large industrial” to describe transmission voltage connected customers but excluding customers that are public utilities [Exhibit B-1-1, pdf p.110]. Does AMPC use the same definition of “large industrial” in its evidence? If not, please explain.
- 3.2 AMPC uses the terms “industrial customers,” “large industrial customers,” “traditional industrial customers,” and “existing core industrial customers.” Please define these terms and discuss whether they are used consistently in the AMPC evidence.

4.0 Topic: Existing Core Industrial Loads

Reference: Exhibit C9-7, AMPC Evidence, p.6

“In AMPC’s view BC Hydro and the Commission should be prepared to take steps to maintain sales volumes to existing core industrial loads if the revenue requirements are to be achieved in practice.” [p.6, underline added]

4.1 What does AMPC mean by “existing core industrial loads”? Is the intention to distinguish between existing transmission service loads (i.e., including “Other” such as large universities) and new transmission service loads? Or to distinguish between “core” and ‘not core’ types of existing transmission service load?

4.1.1 If the latter, what is the definition of “core,” and why should maintenance of existing core TS loads be prioritized over existing non-core TS loads?

5.0 Topic: Load Forecasting and Stepwise Changes
Reference: Exhibit C9-7, AMPC Evidence, p.8

“BC Hydro’s projections for current large industrial customers appear to reflect high level estimates that are workable for rate classes with thousands of smaller customers, where electricity costs are a relatively small proportion of overall costs and exposure to international competition is not a major consideration.” [p.8, underline added]

5.1 Elsewhere in its evidence AMPC appears to acknowledge that BC Hydro’s load forecasting for large industrial customers is based on both an account by account basis and an elasticity of demand of -0.05%. Please explain where in BC Hydro’s load forecasting for large industrial customers AMPC sees “high level estimates.”

“Rather, AMPC expects non-linear threshold effects that are not immediately apparent, however individualized the industrial sales volumes may be. Industrial electricity consumption typically does not change in lockstep with incremental energy price changes, but instead changes in larger blocks when the electricity price hits a level that shifts a facility’s production from economic to uneconomic.” [p.8]

5.2 When AMPCs says it expects industrial customers to exhibit non-linear responses to energy price changes is this at a conceptual level, or at the level of specific industrial customers or sectors that AMPC has knowledge of?

5.3 Does AMPC have a proposed methodology for forecasting non-linear load responses to energy price changes?

“To mitigate against unexpected changes in demand, AMPC recommends that both BC Hydro and the Commission have regard not just to relative rate increases within BC, but electricity prices and rate options available to industry in other jurisdictions, and the competitive pressures they face.”

5.4 Is this statement directed at load forecasting or at load retention?

6.0 Topic: Rate Rebalancing
Reference: Exhibit C9-7, AMPC Evidence, p.12

6.1 Does AMPC agree that a revenue shortfall from the transmission service customer class is to the account of ratepayers of all customer classes except to the extent that there is rate rebalancing based on customer class revenue/cost ratios?

7.0 Topic: Oil and Gas Load
Reference: Exhibit C9-7, AMPC Evidence, Q.9/A.9, pp.9-11

“Q9. What are BC Hydro’s “growth assumptions for the natural gas sector” and the related “economic multiplier effect”, and what are AMPC’s concerns?”

7.1 Is the gist of AMPC’s evidence on this point that BC Hydro’s load forecast is too high because the component for the oil and gas sector, directly and via multiplier effects, particularly the gas portion, is unrealistically high?

8.0 Topic: Authorship
Reference: Exhibit C9-7, AMPC Evidence

8.1 Who is (are) the author(s) of the AMPC evidence.